



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/862,857      | 05/22/2001  | Christopher J. Klein | ONE01 P-300         | 8374             |

7590 03/29/2004

Price, Heneveld, Cooper,  
DeWitt & Litton  
695 Kenmoor, S.E.  
Post Office Box 2567  
Grand Rapids, MI 49501

EXAMINER

AU, SCOTT D

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

2635

DATE MAILED: 03/29/2004

7

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/862,857

Applicant(s)

KLEIN ET AL.

Examiner

Scott Au

Art Unit

2635

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 May 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_.

### **DETAILED ACTION**

The application of Klein et al. for a "System and method for remote opening of handicap access doors" filed May 22, 2001 has been examined.

Claims 1-22 are pending.

### ***Information Disclosure Statement***

The information disclosure statement filed May 22, 2001 fails to comply with 37 CFR 1.98(a)(1), which requires a list of all patents, publications, or other information submitted for consideration by the Office. It has been placed in the application file, but the information referred to therein has not been considered.

### ***Claim Rejections - 35 USC § 112***

Claim 20 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 20 recites the limitation "the wheelchair ". There is insufficient antecedent basis for this limitation in the claim. For future, Examiner treat claim 20 is depended upon claim 19.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-2 are rejected under 35 U.S.C. 102(b) as being unpatentable over by Gonzales et al. (US# 5,936,544).

Referring to claim 1, Gonzales et al. disclose a control system for remotely activating an automatically opening door comprising:

a plurality of transmitters (32a-n) (i.e. concentrators or multiplexers) held by different people, each transmitter transmits control signals (col. 3 lines 5-14; see Figure 1); a plurality of doors (30a-n) (i.e. doors) at least some of which being mounted in different buildings, each of said doors including an actuator (40i-4) (i.e. lock hardware) for automatically opening and closing said door and a receiver (24a-n) (i.e. authorizing modules) electrically coupled to said actuator (40i-4) (i.e. lock hardware) for receiving control signals from said transmitters (32a-n) (i.e. concentrators or multiplexers) and activating said actuator (40i-4) (i.e. lock hardware) to open said door in response to the receipt of said control signals, wherein any one of said transmitters may be used to open any of said doors (col. 2 line 38 to col. 3 line 65 and col. 5 lines 48-55; see Figures 1-2).

Referring to claim 2, Gonzales et al. disclose a control system of claim 1, wherein the control signals transmitted from said transmitters are RF signals (col. 2 lines 46-48).

***Claim Rejections - 35 USC § 102***

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

Claims 7-8, 11-14 and 17 are rejected under 35 U.S.C. 102(e) as being unpatentable over by Farris et al. (US# 6,154,544).

Referring to claim 7, Farris et al. disclose a receiver (12) (i.e. head unit) for an automatic door assembly having a door (24) (i.e. garage door) and an actuator (228) (i.e. motor controller) coupled to the receiver (12) (i.e. head unit) for automatically opening and closing the door (24) (i.e. garage door) in response to an activation signal, said receiver (12) (i.e. head unit) comprising:

a receiver circuit (i.e. a receiver circuit, see Figure 3) for receiving a rolling code control signal from a remote transmitter (30) (i.e. transmitter); and a control circuit (214) (i.e. controller) coupled to the actuator (228) (i.e. motor controller) and said receiver circuit (i.e. a receiver circuit, see Figure 3), wherein said control circuit (214) (i.e. controller) is configured to decrypt any received rolling code control signal using a

Art Unit: 2635

specific public key and to determine whether any received consecutive hopping codes are decrypted that correspond to consecutive codes of a rolling code algorithm, said control circuit (214) (i.e. controller) supplies the activation signal to the actuator (228) (i.e. motor controller) when any received consecutive hopping codes are decrypted that correspond to consecutive codes of the rolling code algorithm (col. 3 lines 13-61, col. 4 line 63 to col. 5 line 13 and col. 6 lines 4-17; see Figures 1-3 and 5A-B).

Referring to claim 8, Farris et al. disclose a receiver of claim 7, wherein the control signals received by said receiver circuit are RF signals (col. 5 lines 8-10).

Referring to claim 11, Farris et al. disclose a receiver of claim 7, wherein said rolling code signals received by said receiver circuit each include a 32-bit serial number (col. 3 lines 13-25).

Referring to claim 12, Farris et al. disclose a receiver of claim 7 and further comprising a door (24) (i.e. garage door) and an actuator (228) (i.e. motor controller) for opening and closing said door, said actuator (228) (i.e. motor controller) is responsive to an activation signal supplied from said control circuit (col. 3 lines 13-61, col. 4 line 63 to col. 5 line 13 and col. 6 lines 4-17).

Referring to claim 13, Farris et al. disclose a transmitter (30) (i.e. transmitter) for remotely activating an automatic door unit (i.e. see Figure 1) having a door (24) (i.e.

garage door), an actuator (228) (i.e. motor controller) for automatically opening and closing the door in response to an activation signal, and a receiver (12) (i.e. head unit) coupled to the actuator (228) (i.e. motor controller) for supplying the activation signal in response to the receipt of a rolling code control signal having consecutive hopping codes that correspond to consecutive codes of a rolling code algorithm, said transmitter comprising:

- a transmitting circuit (i.e. transmitting circuit, see Figure 2) for transmitting control signals; and

- a control circuit (i.e. control circuit of transmitter (30), see Figure 4) for generating and encrypting a rolling code control signal using a public key, the rolling code control signal including a plurality of consecutive hopping codes the sequence of which is determined in accordance with the same rolling code algorithm used by the receiver (12) (i.e. head unit) (col. 3 lines 13-61, col. 4 line 63 to col. 5 line 33 and col. 6 lines 4-17; see Figures 1- 5A-B).

Referring to claim 14, Farris et al. disclose a transmitter of claim 13, wherein the control signals transmitted from said transmitter are RF signals (col. 5 lines 8-10).

Referring to claim 17, Farris et al. disclose a transmitter of claim 13, wherein said rolling code signal transmitted from said transmitter includes a 32-bit serial number (col. 3 lines 13-25).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

- (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gonzales et al. (US# 5,936,544) as applied to claim 1 above, and further in view of Murray (US# 5,898,397).

Referring to claim 3, Gonzales et al. disclose a control system of claim 1. However, Gonzales et al. did not explicitly disclose wherein the control signals transmitted from said transmitters are rolling code signals.

In the same field of endeavor of signal type, Murray discloses wherein the control signals transmitted from said transmitters are rolling code signals (col. 9 lines 26-51; see Figure 11) is used in a remote keyless entry system.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to include the control signals transmitted from said transmitters are rolling code signals disclosed by Murray into wireless access system of Gonzales et al. with the motivation for doing so would allow rolling code signals to access door system.



Referring to claim 4, Gonzales et al. in view of Murray disclose a control system of claim 3, Murray discloses wherein said rolling code control signals transmitted from said plurality of transmitters are encrypted and decrypted using a common predetermined manufacturer's key (col. 9 lines 26-51; see Figure 11).

Referring to claim 5, Gonzales et al. in view of Murray disclose a control system of claim 4, Murray discloses wherein said common predetermined manufacturer's key is verified by the receiver using specified bits of a serial number as discrimination bits, the serial number being included in the rolling code signal transmitted from one of said transmitters (col. 9 lines 26-51; see Figure 11).

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gonzales et al. (US# 5,936,544) in view of Murray (US# 5,898,397) as applied to claim 3 above, and further in view of Farris et al. (US# 6,154,544).

Referring to claim 6, Gonzales et al. in view of Murray disclose a control system of claim 3. However, Gonzales et al. in view of Murray did not explicitly disclose wherein said rolling code signals transmitted from said plurality of transmitters each include a 32-bit serial number.

In the same field of endeavor of security system, Farris et al. disclose wherein said rolling code signals transmitted from said plurality of transmitters each include a

32-bit serial number (col. 3 lines 13-25) in order to produce an amplitude modulated encrypted signal.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to include said rolling code signals each include a 32-bit serial number disclosed by Farris et al. into remote access system of Gonzales et al. in view of Murray with the motivation for doing so would allow a 32 bit size signal is used to access door system.

Claims 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Farris et al. (US# 6,154,544) as applied to claim 7 above, and further in view of Murray (US# 5,898,397).

Referring to claim 9, Farris et al. disclose a receiver of claim 7. However, Farris et al. did not explicitly disclose wherein said control circuit decrypts the rolling code control signals received by said receiver circuit using a common predetermined manufacturer's key.

In the same field of endeavor of code key transmitters, Murray discloses wherein said control circuit decrypts the rolling code control signals received by said receiver circuit using a common predetermined manufacturer's key (col. 9 lines 26-50; see Figure 11) in order to generate an output signal which is transmitted to the receiver.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to include said control circuit decrypts the rolling

code control signals received by said receiver circuit using a common predetermined manufacturer's key disclosed by Murray into security system of Farris et al. with the motivation for doing so would allow access to the receiver door system.

Referring to claim 10, Farris et al. in view of Murray disclose a receiver of claim 9, Murray discloses wherein said common predetermined manufacturer's key is verified by the receiver circuit using specified bits of a serial number as discrimination bits, the serial number being included in the rolling code signal transmitted from the remote transmitters (col. 9 lines 26-50; see Figure 11).

Claims 15-16 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Farris et al. (US# 6,154,544) as applied to claim 13 above, and further in view of Murray (US# 5,898,397).

Referring to claim 15, Farris et al. in view of Murray disclose a control system in claim 1, claim 15 equivalent to that of claim 4 addressed above, incorporated herein. Therefore, claim 15 is rejected for same reasons given with respected to claim 4.

Referring to claim 16, Farris et al. in view of Murray disclose a control system in claim 1, claim 16 equivalent to that of claim 5 addressed above, incorporated herein. Therefore, claim 16 is rejected for same reasons given with respected to claim 5.

Referring to claim 18, Farris et al. disclose a transmitter of claim 13. Farris et al. disclose further wherein said rolling code control signal transmitted from said transmitter includes an encrypted portion and a non-encrypted portion, the encrypted portion changing on a predetermined basis and the non-encrypted portion remaining fixed (col. 3 lines 13-26).

However, Farris et al. did not explicitly disclose each transmission and including a unique serial number that is stored in a table within a receiver to which the control signal is transmitted, the table including a plurality of pairs of data including serial numbers of transmitters and rolling code information so as to decrypt the encrypted portion of the control signal and compare a synchronization value within the decrypted data to the rolling code information stored in the table.

In the same field of endeavor of code key transmitter, Murray discloses each transmission and including a unique serial number that is stored in a table within a receiver to which the control signal is transmitted, the table including a plurality of pairs of data including serial numbers of transmitters and rolling code information so as to decrypt the encrypted portion of the control signal and compare a synchronization value within the decrypted data to the rolling code information stored in the table (col. 9 lines 26-50) in order to generate an output signal which is transmitted to the receiver.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to include each transmission and including a unique serial number that is stored in a table within a receiver to which the control signal is transmitted, the table including a plurality of pairs of data including serial

numbers of transmitters and rolling code information so as to decrypt the encrypted portion of the control signal and compare a synchronization value within the decrypted data to the rolling code information stored in the table disclosed by Murray into security system of Farris et al. with the motivation for doing so would allow wireless accessing to the door system.

Claims 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Farris et al. (US# 6,154,544) as applied to claim 13 above, and further in view of Piper et al. (US# 6,707,377).

Referring to claim 19, Farris et al. disclose a transmitter of claim 13. However, Farris et al. did not explicitly disclose a wheelchair comprising the transmitter and further comprising: a support structure for supporting at least a portion of a person's body; and a pair of wheels rotatably mounted to said support structure, wherein said transmitter is mounted to said support structure.

In the same field of endeavor of remote control apparatus, Piper et al. disclose a wheelchair comprising the transmitter and wherein transmitter is mounted to said support structure (col. 3 lines 1-6, col. 4 lines 53-62 and see abstract) in order access door opener.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to include a wheelchair with support structure and wheels comprising the transmitter and wherein transmitter is mounted to said support

Art Unit: 2635

structure disclosed by Piper et al. into security system of Farris et al. with the motivation for doing so would a remote control is used to access a door entrance.

Referring to claim 20, Farris et al. in view of Piper et al. disclose a transmitter of claim 1, Piper et al. disclose further including an activation mechanism coupled to said transmitter for causing said transmitter to transmit a control signal (col. 4 lines 53-62)

Claims 21-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gonzales et al. (US# 5,936,544) in view Bruwer (US# 6,166,650).

Referring to claim 21, Gonzales et al. disclose a secure system to allow multiple users to remotely open a plurality of electronically actuated doors in numerous locations, said system comprising:

A plurality of transmitters (32a-n) (i.e. concentrators or multiplexers), said transmitters (32a-n) (i.e. concentrators or multiplexers) transmitting open door signals and

A plurality of receivers (24a-n) (i.e. authorizing modules) in electrical communication with said plurality of electronically actuated doors (30a-n) (i.e. doors) to receive open door signals from said transmitters (32a-n) (i.e. concentrators or multiplexers) to initiate the opening of said doors in response to the receipt of said signals, each said receivers (24a-n) (i.e. authorizing modules) including at least one

decoder microchip comprising a circuit in which second identification value is stored (col. 2 line 38 to col. 3 line 65 and col. 5 lines 48-55; see Figures 1-2).

However, Gonzales et al. did not explicitly disclose an encoder microchip comprising a circuit in which an identification value is stored, a circuit in which a counter value is stored, a logic circuit that changes the value of the counter value each time the transmitter is operated, and a non-linear encoding circuit to encode the counter value to generate a transmission value, and

a circuit in which the transmission value from an encoder microchip of a transmitter is received, a circuit in which the transmission value is decoded to generate a decoded counter value, and a circuit in which the second decoded counter value obtained from the previous transmission is stored.

In the same field of endeavor of access control system, Bruwer discloses an encoder microchip (10) (i.e. encoder circuit) comprising a circuit in which an identification value is stored, a circuit in which a counter value is stored, a logic circuit that changes the value of the counter value each time the transmitter is operated, and a non-linear encoding circuit to encode the counter value to generate a transmission value, and

a circuit (12) (i.e. decoder) in which the transmission value from an encoder microchip of a transmitter is received, a circuit in which the transmission value is decoded to generate a decoded counter value, and a circuit in which the second decoded counter value obtained from the previous transmission is stored (col. 11 lines

15-43, col. 12 lines 7-65 and col. 19 line 33 to col. 20 line 54; see Figures 1-3) in order to access a security area.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to include an encoder comprising a circuit in which an identification value is stored, a circuit in which a counter value is stored, a logic circuit that changes the value of the counter value each time the transmitter is operated, and a non-linear encoding circuit to encode the counter value to generate a transmission value, and a circuit in which the transmission value from an encoder microchip of a transmitter is received, a circuit in which the transmission value is decoded to generate a decoded counter value, and a circuit in which the second decoded counter value obtained from the previous transmission is stored of system disclosed by Bruwer into wireless access system of Gonzales et al. with the motivation for doing so would allow a transmitter with the valid id is used to operate an access door system.

Referring to claim 22, Gonzales et al. in view of Bruwer disclose the system of claim 21, Bruwer further disclose wherein each receiver comprises a number of decoder microchips, said number of decoder microchips corresponding to the number of transmitters in the system (col.11 lines 29-43; see Figures 1-3).

### ***Conclusion***



The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Issa (US# 5,945,936) discloses learn mode for remote transmitters.

Strab (US# 5,515,649) discloses automatic door operator.

Any inquiry concerning this communication or earlier communications form the examiner should be directed to Scott Au whose telephone number is (703) 305-4680. The examiner can normally be reached on Mon-Fri, 8:30AM – 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Horabik can be reached at (703) 305-4704. The fax phone numbers for the organization where this application or proceeding is assigned are (703)-872-3906.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)-305-3900.

Scott Au

MICHAEL HORABIK  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600

